Amendments to the Specification

Insert the following paragraph on page 1, before the first line:

Cross-Reference to the Related Applications

This application is a national phase of PCT application No. PCT/JP2004/016609, filed November 9, 2004, the entire contents of which are incorporated by reference. This application also claims benefit of priority under 35 U.S.C § 119 to Japanese Patent Application No. 2003-382033 filed November 12, 2003 and Japanese Patent Application No. 2004-113570 filed April 7, 2004, the entire contents of which are incorporated by reference.

Replace paragraph [0003] with the following rewritten paragraph:

Such an electronic throttle valve system is equipped with a ~~failsafe~~ function which stops the driving of the throttle valve by an electric motor and returns the throttle valve to the full closed position with the urging force of a spring when the control system has a failure. The engine is therefore maintained in such a state that ~~escape~~ a failure operation can be conducted and the vehicle can be driven to a ~~safe~~ place.

Replace paragraph [0004] with the following rewritten paragraph:

When a bypass line is provided so that a certain amount of air can be sucked into the engine even when the throttle valve is returned to the full closed position by the urging force of a spring, the engine can be maintained in such a state that ~~escape~~ a failure operation can be conducted.

Replace paragraph [0006] with the following rewritten paragraph:

The speed, at which a throttle valve is rotated in the closing direction by the urging force of a spring when the control system has a failure, is very high. Thus, the output of the engine is rapidly decreased. In the case of a motor vehicle (four-wheeled motor vehicle), the driver does not feel a change in the motion of the vehicle

even when the engine output is rapidly decreased since the vehicle is heavy. In the case of a two-wheeled motor vehicle which is light, however, the rider feels a change in the motion of the vehicle~~, .which may adversely affect the operability of the vehicle or give the rider an uncomfortable feeling~~.

Replace paragraph [0011] with the following rewritten paragraph:

The present invention has been made in view of the above points and it is, therefore, an object of the present invention ~~is~~ to provide an electronic throttle valve control system which requires no additional housing space and can reliably prevent rapid rotation of a throttle valve when the control system has a failure.

Replace paragraph [0012] with the following rewritten paragraph:

An electronic throttle valve control system according to the present invention ~~having~~ has: a throttle valve for controlling the amount of intake air to an internal combustion engine; an electric motor for driving the throttle valve; and a rotational speed reduction mechanism for reducing the rotation of the electric motor to control the rotation of the throttle valve[[,]]. The control system further comprises: an urging mechanism for urging the throttle valve in the closing direction; and an attenuation mechanism for attenuating the speed at which the throttle valve is rotated in the closing direction by the urging force of the urging mechanism when the control system has a failure, wherein at least one of the urging mechanism and the attenuation mechanism is connected to the rotational speed reduction mechanism.

Replace paragraph [0029] with the following rewritten paragraph:

10: throttle valve

11, 41: throttle body

~~12,~~ 42: throttle valve

12,~~42b~~42a: valve shaft

20, ~~43b~~43a: electric motor

21: control section

30: rotational speed reduction mechanism

30a, 30b, 30c: rotor (reduction gear)

31: urging mechanism (spring)

33, 73: piston

34, 72: cylinder

35, 74: air discharge port

36, 76: opening

37, 75: electromagnetic valve

38: attenuation mechanism

40: throttle mechanism

43: electric driving mechanism

43b: driving gear

43c: intermediate large gear

43e: valve shaft driving gear

43d: intermediate small gear

43f: case

44: throttle valve opening sensor

45: free arm

46: link plate

47: intermediate pulley

48: throttle cable

49: throttle trip

50: throttle grip opening sensor

51: fuel injection valve

52: fuel supply pipe

60: throttle operation mechanism

70: air damper

71: rod

100: control unit

103: vehicle speed sensor

107: engine unit

~~143: electric driving mechanism~~

201, 202: input circuit

206: driving circuit

208: output monitoring circuit

214: motor power interrupt circuit

300: relay circuit

Best Mode for Carrying Out the Invention

Replace paragraph [0030] with the following rewritten paragraph:

An electronic throttle valve system is advantageous in reducing emission and fuel consumption but has to be equipped with a ~~failsafe~~ function which is activated when the electronic throttle valve control system has a failure. However, when a ~~failsafe~~ function used for a four-wheeled motor vehicle is applied to a two-wheeled motor vehicle, the rider of the two-wheeled motor vehicle feels a sudden change in the motion of the vehicle, which the driver of the four-wheeled motor vehicle does not feel, since a two-wheeled motor vehicle is lighter than a four-wheeled motor vehicle.

Replace paragraph [0035] with the following rewritten paragraph:

Fig. 2 is a side view of some of the rotors (~~30a~~ 30b and 30c), viewed along the valve shaft 12 of the throttle valve 10. An urging mechanism (such as a spring) 31 is wound around the rotating shaft of the rotor 30c. One end 31a of the urging mechanism 31 is engaged on a pin 32 provided on the rotor 30c, and the other end 31b is supported on the outside of an external member such as the throttle body 11

(not shown). The urging mechanism ~~30~~ 31 urges the valve shaft 12 (not shown) in the closing direction via the rotor 30c.

Replace paragraph [0042] with the following rewritten paragraph:

The ~~failsafe~~ function in the present invention is activated by shifting the electric motor 20 to a regenerative mode, and the operation can be controlled using the control circuit for controlling the normal operation of the electric motor 20. That is, since the ~~failsafe~~ function in the present invention can be accomplished by using the electric motor 20 for driving the throttle valve 10 as a cushioning means for preventing rapid rotation of the throttle valve and the control circuit for controlling the forward and reverse rotation of the electric motor 20 as means for controlling the cushioning means, there is no need to provide any additional mechanism to a conventional electronic throttle valve control system.

Replace paragraph [0048] with the following rewritten paragraph:

The urging force of the urging mechanism 31 is ~~so~~ adjusted so that the opening of the throttle valve 10 is enough for the internal combustion engine to be maintained in such a state that ~~escape~~ a failure operation can be conducted at the predetermined opening position 10b shown in Fig. 5. ~~The internal combustion engine is in such a state that escape operation can be conducted means that the engine is in such a state that~~ In this state, the vehicle can be at least driven to a ~~safe~~ place such as a roadside even when the electric control of the electronic throttle valve system is lost. It includes the idle operation state.

Replace paragraph [0050] with the following rewritten paragraph:

Although the throttle valve is rotated in the closing direction and held in a predetermined opening position when the control system has a failure in this embodiment, the throttle valve may be rotated to the full closed position when the internal combustion engine can be maintained by other means in such a state that

~~escape~~ a failure operation can be conducted. For example, when a bypass line is provided in the throttle body so that a certain amount of air can be introduced into the internal combustion engine through the bypass line when the control system has a failure, the internal combustion engine can be maintained in such a state that ~~escape~~ a failure operation can be conducted. In the case of a two-wheeled motor vehicle, there is no need to provide such a bypass line when it is so light that the rider can walk it even when the throttle valve is fully closed.

Replace paragraph [0052] with the following rewritten paragraph:

According to the electronic throttle valve control system of the present invention, the throttle valve is not rotated rapidly even when the control system has a failure and a ~~failsafe~~ function is activated. As a result, the rider of the two-wheeled motor vehicle does not feel a sudden change in the motion of the vehicle.

Replace paragraph [0053] with the following rewritten paragraph:

Fig. 7 is a view illustrating an example in which an air damper is used as the attenuation mechanism 38. An end of a piston 33 reciprocable in a cylinder 34 is connected to the rotor 30c. The cylinder 34 has an air discharge port 35 and an opening 36 at its end, and an electromagnetic valve 37 is attached in the opening 36. The magnitude of resistance applied to the reciprocating movement of the piston ~~34~~ 33 in the cylinder 34 is controlled by opening and closing the electromagnetic valve 37.

Replace paragraph [0054] with the following rewritten paragraph:

When the electronic throttle valve system is operating normally, the electromagnetic valve 37 is opened and no resistance is applied to the reciprocating movement of the piston ~~34~~ 33 in synchronization with the rotor 30c. When the control system has a failure, the electromagnetic valve 37 is closed and a resistance is applied to the reciprocating movement of the piston ~~34~~ 33.

Replace paragraph [0056] with the following rewritten paragraph:

The piston ~~34~~ 33 is preferably connected to the rotor 30c, which is closest to the throttle valve 10. The rotational speed reduction mechanism 30 for reducing the rotation of the electric motor 20 is usually constituted of a number of parts complexly assembled, and the rotor 30c, which is closest to the throttle valve 10, has the smallest turn range. Thus, when the piston 33 is connected to the rotor 30c, the distance through which the piston 33 reciprocates is smallest, and the air damper as an attenuation mechanism can be compact.

Replace paragraph [0090] with the following rewritten paragraph:

The driving circuit 206 controls the turn-on and turn-off of the transistors FET1 to FET4 based on the control signal inputted from the CPU 205 to rotate the electric motor 43a in the forward or reverse direction so that the ~~electric~~ throttle valves 42 can be opened or closed to a desired opening position.

Replace paragraph [0096] with the following rewritten paragraph:

The control operation at the time when the sensor 44 or ~~55~~ 50 has a failure will be described.

Replace paragraph [0101] with the following rewritten paragraph:

As described previously, in the electronic throttle valve control system, when the sensor 44 or ~~45~~ 50 has a failure, the power supply from the motor power source to the driving circuit 206 for driving the electric motor 43a is cut off and then the electronic motor 43a is shifted to the brake mode by the driving circuit 206.

Replace paragraph [0102] with the following rewritten paragraph:

Thus, when the control system has a failure, an abrupt action of the throttle valve caused by rapid rotation of the electric motor can be prevented and a sudden

change in the motion of the two-wheeled vehicle can be prevented. As a result, the rider does not feel discomfort and a change in the operability. Also, there is no need to provide an additional mechanism in the driving system or an additional circuit in the control system, the above ~~failsafe~~ function can be achieved at a low cost.

Replace paragraph [0105] with the following rewritten paragraph:

Although the present invention is applied to a vehicle having an engine unit as a power source in the above example, this invention is not limited thereto. The present invention is applicable to a vehicle having an electric motor, for example, as a power source. Also, although the throttle mechanism has the electric driving mechanism ~~143~~ 43 and the throttle operation mechanism 60 as driving sources, the spring for urging the throttle valves may be used as a driving source.

Replace the Abstract with the following rewritten Abstract:

~~[Abstract]~~

~~[Problem] To provide an~~ An electronic throttle valve control system ~~which can prevent~~ prevents rapid rotation of a throttle valve reliably when the control system has a failure. ~~[Solution]~~ A throttle valve ~~10 for controlling~~ controls the amount of intake air to an internal combustion engine, an electric motor ~~20 for driving~~ drives the throttle valve ~~10~~, and a rotational speed reduction mechanism ~~30 for reducing~~ reduces the rotation of the electric motor ~~20~~ to control the rotation of the throttle valve ~~10 are provided~~. ~~The rotational speed reduction mechanism 30 has an~~ An urging mechanism ~~31 for urging~~ urges the throttle valve ~~10~~ in the closing direction. ~~The rotational speed reduction mechanism 30 is connected to an~~ An attenuation mechanism ~~38(20) for attenuating~~ attenuates the speed at which the throttle valve ~~10~~ is rotated in the closing direction by the ~~urging force of~~ the urging mechanism ~~31~~ when the control system has a failure. The attenuation mechanism ~~38~~ is ~~constituted of~~ the electric motor ~~20~~ in a regenerative mode or an air damper.

~~[Selected Drawing] Fig. 1~~